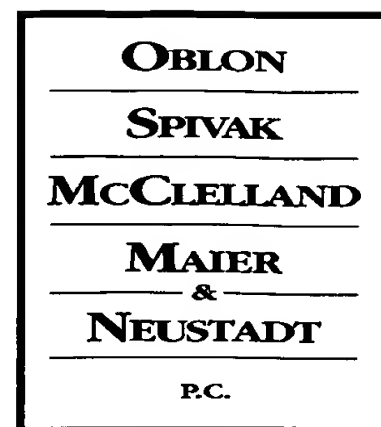




Docket No.: 210354US0

COMMISSIONER FOR PATENTS  
ALEXANDRIA, VIRGINIA 22313



ATTORNEYS AT LAW

RE: Application Serial No.: 09/892,577  
Applicants: Shigefumi SAKAI, et al.  
Filing Date: June 28, 2001  
For: SKIN COSMETIC COMPOSITION  
Group Art Unit: 1617  
Examiner: Yu, G.C.

SIR:

Attached hereto for filing are the following papers:

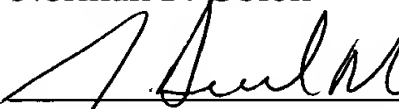
**Letter to PTO**

**Supplemental Reply Brief w/attachments**

Our check in the amount of \$0.00 is attached covering any required fees. In the event any variance exists between the amount enclosed and the Patent Office charges for filing the above-noted documents, including any fees required under 37 C.F.R. 1.136 for any necessary Extension of Time to make the filing of the attached documents timely, please charge or credit the difference to our Deposit Account No. 15-0030. Further, if these papers are not considered timely filed, then a petition is hereby made under 37 C.F.R. 1.136 for the necessary extension of time. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,  
MAIER & NEUSTADT, P.C.  
Norman F. Oblon

  
J. Derek Mason, Ph.D.

Registration No. 35,270

Customer Number

**22850**

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Docket No.: 210354US0



IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF

:

Shigefumi SAKAI, et al.

ART UNIT: 1617

SERIAL NO: 09/892,577

:

FILED: June 28, 2001

: EXAMINER: Yu, G.C.

FOR: SKIN COSMETIC COMPOSITION

LETTER TO PTO

COMMISSIONER FOR PATENTS  
P.O. BOX 1450  
ALEXANDRIA, VA 22313-1450

SIR:

Attached herewith is a Supplemental Reply Brief for filing in order to replace the  
Reply Brief filed on September 13, 2006.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,  
MAIER & NEUSTADT, P.C.  
Norman F. Oblon

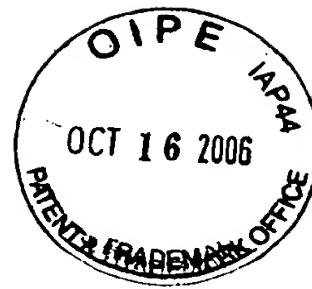
J. Derek Mason, Ph.D.  
Registration No. 35,270

Customer Number

**22850**

Tel: (703) 413-3000  
Fax: (703) 413-2220  
(OSMMN 08/03)

DOCKET NO: 210354US0



IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF :  
SHIGEFUMI SAKAI, ET AL. : EXAMINER: YU, GINA  
SERIAL NO: 09/892,577 :  
FILED: JUNE 28, 2001 : GROUP ART UNIT: 1617  
FOR: SKIN COSMETIC COMPOSITION :

SUPPLEMENTAL REPLY BRIEF

COMMISSIONER FOR PATENTS  
ALEXANDRIA, VIRGINIA 22313

SIR:

In response to the Examiner's Answer dated July 13, 2006, Appellants provide the following comments.

Appellants have made it clear that a key factor in the present invention is the particular combination of hydrogel particles with an aqueous medium having the recited viscosity and specific gravity in order to provide a composition in which the hydrogel particles are "stably and homogeneously dispersed therein, without precipitating or floating." (see specification at page 18, lines 16-18). However, the Examiner has failed to provide motivation for selecting the viscosity and specific gravity of the aqueous medium other than reciting that the secondary references show cosmetic type compositions having viscosity or specific gravity within the claimed range. The Examiner acknowledges that Delrieu does not disclose a viscosity or specific gravity range. In fact, there is no teaching of such factors anywhere within Delrieu. The Examiner then uses Noda and Rosenstreich to "teach" one of ordinary skill in the art to use the viscosity or specific gravity range taught in these secondary

references in the compositions of Delrieu. But the Examiner provides no reason why one of ordinary skill would pick these particular references and the viscosity and specific gravity of the particular references. Neither of these secondary references has any mention of hydrogel particles. Noda is discussing compositions merely having gelatin microcapsules, and Rosenstreich doesn't disclose hydrogel particles at all.

In detail, Noda discloses a make-up or hair cosmetic composition comprising microcapsules composed of gelatin film swollen with water and enclosing oily materials therein. The microcapsules are produced by a coacervation method, namely an aqueous solution of gelatin is mixed with oily substances, and hardened by using a hardener component, e.g. glutaraldehyde, to form a capsule film. Therefore, the gelatin microcapsule in Noda doesn't correspond to the hydrogel particle of the present invention at all.

Although Noda describes "agar" in the description (See column 8, lines 45 to 57), it is used by Noda only as a water-soluble polymer in the aqueous phase of the cosmetic composition, not as a particulate component.

As to the specific gravity, the Examiner points out a portion of Noda, namely column 3, lines 41 to 45, saying "it teaches of a surfactant solution containing capsules with improved dispersity by adjustment of the specific gravity". Firstly Applicants note that the statement in Noda mentions **improved dispersibility**, NOT 'improved dispersity'. As noted elsewhere in this paper, dispersibility relates to the ease with which a substance can be dispersed. However, dispersity relates to how the substance is dispersed (i.e. homogeneously dispersed, non-homogeneously dispersed, etc.).

Further, an investigation of the reference mentioned by Noda (Unexamined Patent Publication (KOKAI) No. 61-112897), which corresponds to US 4,646,525 by Air Liquide, shows that it discloses an invention on "Vessel for a cryogenic mixture and a process for drawing off the liquid". The INPADOC family information is attached herewith. The

reference belongs to a completely different technical field. Further, and more importantly, there is no mention in the text of this patent referred to by Noda, of a surfactant solution containing capsules or adjustment of specific gravity to improve dispersibility.

Therefore, the statement by Noda referring to this reference is not accurate, and thus cannot be an adequate document to show a description of adjusting specific gravity to improve dispersibility, nor to affect the patentability of the present invention.

Thus the recitation of a viscosity or specific gravity in the reference compositions cannot suggest that such values be combined with hydrogel particles with the expectation of obtaining the characteristics required in the present invention (particularly in claim 51). Just because a reference is in the cosmetic compositions art, and happens to disclose a specific gravity or viscosity does not automatically suggest that one of ordinary skill in the art would pluck those numbers from the references to insert them into another reference in which the compositions are made of entirely different components!

The Examiner is misapplying the law on obviousness in order to combine the presently cited references. In *In re Dembiczak*, the Federal Circuit noted that in order to support an obviousness determination, there must be a showing of a suggestion, teaching or motivation to combine the prior art references and this suggestion, teaching or motivation "must be clear and particular....Broad conclusory statements regarding the teaching of multiple references, standing alone, are not 'evidence.'"<sup>1</sup> The Federal Circuit further noted in *In re Lee*, "when patentability turns on the question of obviousness, the search for and analysis of the prior art includes evidence relevant to the finding of whether there is a teaching, motivation, or suggestion to select and combine the references relied on as evidence

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<sup>1</sup> *In re Dembiczak*, 175 F.2d 994, 50 USPQ2d 1614 (Fed. Cir. 1999)

of obviousness.”<sup>2</sup> This teaching, motivation or suggestion must also be made in the prior art with specificity. The Federal Circuit notes also in *In re Lee*:

“The need for specificity pervades this authority. *See, e.g., In re Kotzab*, 217 F.3d 1365, 1371, 55 USPQ2d 1313,1317 (Fed. Cir. 2000) (‘particular findings must be made as the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed’); *In re Rouffet*, 149 F.3d 1350, 1359, 47 USPQ2d 1453, 1459 (Fed. Cir. 1998) (‘even when the level of skill in the art is high, the Board must identify specifically the principle, known to one of ordinary skill, that suggests the claimed combination. In other words, the Board must explain the reasons one of ordinary skill in the art would have been motivated to select the references and to combine them to render the claimed invention obvious.’)”<sup>3</sup> (emphasis added)

The Examiner continues to assert that one of ordinary skill in the art would be motivated to combine the cited references to arrive at the present invention, without any indication as to where the references provide that suggestion or motivation, particularly with respect to the selection of the specific gravity and viscosity requirements of the aqueous medium of the present composition. As an example, in responding to Appellants comments that Rosenstreich cannot suggest the viscosity and specific gravity of the present invention, since Rosenstreich contains no mention of hydrogel particles (or other type of particles for that matter), the Examiner even goes so far as to state: “Examiner is well aware that the Rosenstreich composition does not contain hydrogel particles, however, appellants’ claim limitations on viscosity and specific gravity do not bear any criticality either.” (see page 10, lines 8-10 of Examiner’s Answer).

A key feature of the present invention is the combination of the hydrogel particles with an aqueous medium having certain viscosity and specific gravity limitations, in order to

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<sup>2</sup> *In re Lee*, 277 F.3d 1338, 61 USPQ2d 1430 (Fed. Cir. 2002)

<sup>3</sup> *ibid.*

provide a product in which the hydrogel particles are “stably and homogeneously dispersed” in the aqueous medium, “without precipitating or floating”. (see specification at page 18, lines 16-18; and the color photo of an embodiment of the present invention showing the dispersed particles therein provided in the last response and in the earlier personal interview). Thus, for the Examiner to take the position that any reference in the cosmetic arts that happens to disclose a viscosity or specific gravity coinciding with the present invention, even when there is nothing whatsoever in the reference about hydrogel particles, or the balancing of the viscosity and specific gravity in order to obtain the stable and homogeneous dispersion of the particles without floating or precipitating (i.e. suspended within the medium) (see claim 51), does not meet the specificity required by the case law in making an obviousness rejection. The Examiner is merely relying on hindsight based on Appellants own disclosure.

Additionally, the Examiner has erroneously equated agitation of an oil bath (as disclosed by Delrieu) with applying vibrations to the orifice, directly to the dispersion or the emulsion itself or the liquid column being discharged from the orifice (claims 34-36). Although Appellants assert that one of ordinary skill in the art would recognize that the agitation of the oil bath taught by Delrieu indicates stirring of the oil bath, even if Appellants accept the Examiner's assertion that this could include application of vibrations to the oil bath, such application of vibrations to the oil bath **is not what is claimed in claims 34-36**. Particularly with respect to claim 35, the vibrations are specifically stated to be either (a) applied **to the orifice** (from which the dispersion of non-crosslinked hydrogel is being ejected), (b) applied **directly to the dispersion or emulsion**, or (c) applied **to the liquid column** being discharged from the orifice. None of these claimed alternatives would be met by agitation of the oil bath or applying vibration to the oil bath. As such, the Examiner's position cannot stand.

Further, the Examiner is incorrectly equating the control of size of Delrieu's hydrogel particles (by agitation of the oil bath) with the present invention control of "shape and/or uniformity of the particles". The Examiner asserts that the prior art method and the claimed method would obviously produce hydrogel particles with uniform size (see page 11, lines 1-2 of the Examiner's Answer). However, even if that were true, there is nothing in Delrieu to suggest that agitation of the bath would have any effect in controlling shape of the particles.

Lastly, with respect to claim 51, the Examiner disagrees with Appellants definition of the term "dispersibility" with respect to Noda. Appellants note that the term "dispersibility" refers to the ease and/or speed with which particles can be put into dispersion in a medium. In support of this position, Appellants provide herewith two references showing that this term has this meaning. First, from the Integrated Pest Management Resource Centre, the term dispersibility is defined as "the ease with which a substance may be dispersed uniformly in a fluid". Second, from the Sintef website ([http://www.sintef.no/static/ch/environment/lab/dispersibility\\_testing.htm](http://www.sintef.no/static/ch/environment/lab/dispersibility_testing.htm))

the procedure for dispersibility testing is described, by referring to the dispersion rate. However, it is important to note that the ease with which one can disperse a substance in a fluid says nothing with respect to how **stable** the resulting dispersion may be. Thus, the fact that Noda refers to adjustment of the specific gravity for "improved dispersibility" does not correlate to providing a specific gravity such that the hydrogel particles of the present invention are **stably and homogeneously dispersed**, as required by Claim 51. The Examiner has provided no evidence that the term 'dispersibility' is directly correlated to the stability of the dispersion formed. Unless the Examiner can provide such evidence, the Examiner's position cannot stand and the use of Noda in combination with the other cited references to render claim 51 obvious must be reversed.



Application No. 09/892,577

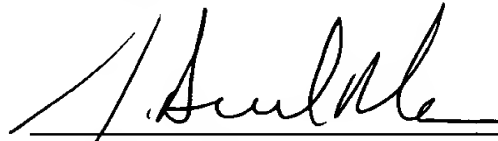
Reply Brief in response to Examiner's Answer of July 13, 2006

Appellants submit that for the reasons above, and those stated in the prior filed Appeal Brief, the Examiner's position must be REVERSED, and the application be passed to allowance.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,  
MAIER & NEUSTADT, P.C.

Norman F. Oblon



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J. Derek Mason

Attorney of Record

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(OSMMN 06/04)

DOCUMENT2



jp61112897/pn

L2 ANSWER 1 OF 1 INPADOC COPYRIGHT 2006 EPO on STN

LEVEL 1

ACCESSION NUMBER: 38192709 INPADOC  
TITLE: VESSEL FOR LIQUID FREEZING MEDIUM MIXTURE AND METHOD  
OF EXTRACTING LIQUID FREEZING MEDIUM MIXTURE.  
INVENTOR(S):  
ORIGINAL: PIEERU DORAKUURU; ROJIE PUROSUTO; JIERARU MONDAN  
MONBUARU  
STANDARDIZED: PIEERU DORAKUURU; ROJIE PUROSUTO; JIERARU MONDAN  
MONBUARU  
PATENT ASSIGNEE(S):  
ORIGINAL: L'AIR LIQUIDE  
STANDARDIZED: AIR LIQUIDE  
DOCUMENT TYPE: Patent  
PATENT INFO. TYPE: JPA2 DOCUMENT LAID OPEN TO PUBLIC INSPECTION  
PATENT INFORMATION:

NUMBER	KIND	DATE
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***JP 61112897		A2 19860530***

APPLICATION INFO.: JP 1985-232353 A 19851019  
PRIORITY APPLN. INFO.: FR 1984-16017 A 19841019  
INT. PATENT CLASSIF.:  
MAIN: (4) F17C003-00 (not assigned by patent authority)  
SECONDARY: (4) F17C013-00; (4) F28D001-06  
IPC RECLASSIF. (ADV): F17C0009-00 [I,A]; F17C0013-02 [I,A]  
IPC RECLASSIF. (CORE): F17C0009-00 [I,C\*]; F17C0013-00 [I,C\*]

=> d ffam

L2 ANSWER 1 OF 1 INPADOC COPYRIGHT 2006 EPO on STN

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MEMBER 1  
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LEVEL 1

AN 3428561 INPADOC  
TI KRYOGENGEMISCHBEHAELTER UND VERFAHREN ZUM ABZAPFEN DER FLUESSIGKEIT. .  
IN DELACOUR, PIERRE; PROST, ALAIN; MONDAIN-MONVAL, GERARD  
INS DELACOUR PIERRE; PROST ALAIN; MONDAIN-MONVAL GERARD  
PA L'AIR LIQUIDE, SOCIETE ANONYME POUR L'ETUDE ET L'EXPLOITATION DES  
PROCEDES GEORGES CLAUDE; COMPAGNIE FRANCAISE DE PRODUITS OXYGENES  
PAS AIR LIQUIDE; FRANCE PROD OXYGENES CO  
PAA FR; FR  
LA French  
DT Patent  
PIT ATE EP PATENT VALID IN AT  
PI AT 39992E E 19890115  
AI AT 1985-401989 EP 19851014  
PRAI EP 1985-401989 A 19851014  
FR 1984-16017 A 19841019  
ICM (4) F17C009-00

IPCR F17C0009-00 [I,A]  
F17C0009-00 [I,C\*]

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MEMBER 2  
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LEVEL 1  
AN 27284593 INPADOC  
TI RECIPIENT POUR MELANGE CRYOGENIQUE ET PROCEDE DE SOUTIRAGE DU LIQUIDE.  
IN DELACOUR, PIERRE; PROST, ROGER; MONDAIN-MONVAL, GERARD  
INS DELACOUR PIERRE; PROST ROGER; MONDAIN-MONVAL GERARD  
INA FR; FR; FR  
PA AIR LIQUIDE, SOCIETE ANONYME POUR L'ETUDE ET L'EXPLOITATION DES PROCEDES  
GEORGES CLAUDE (L')  
PAS AIR LIQUIDE  
PAA FR  
LA French  
DT Patent  
PIT CAA1 PATENT  
PI CA 1279000 A1 19910115  
AI CA 1985-493243 A 19851018  
PRAI FR 1984-16017 A 19841019  
NCL D41620023 M  
ICM (5) F17C009-00  
IPCR F17C0009-00 [I,A]; F17C0013-02 [I,A]  
F17C0009-00 [I,C\*]; F17C0013-00 [I,C\*]

LEGAL STATUS  
AN 27284593 INPADOC  
19990115 CAMKLA - LAPSED  
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MEMBER 3  
-----

LEVEL 1  
AN 21165842 INPADOC  
TI RESERVOIR FOR A CRYOGENIC MIXTURE AND PROCESS FOR DRAWING OFF THE LIQUID  
IN DELACOUR, PIERRE; PROST, ALAIN; MONDAIN-MONVAL, GERARD  
INS DELACOUR PIERRE; PROST ALAIN; MONDAIN-MONVAL GERARD  
PA L'AIR LIQUIDE, SOCIETE ANONYME POUR L'ETUDE ET L'EXPLOITATION DES  
PROCEDES GEORGES CLAUDE; COMPAGNIE FRANCAISE DE PRODUITS OXYGENES  
PAS AIR LIQUIDE; FRANCE PROD OXYGENES CO  
PAA FR; FR  
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PI DE 3567528 C0 19890216  
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F17C0009-00 [I,C\*]; F17C0013-00 [I,C\*]

LEGAL STATUS

AN 21165842 INPADOC  
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MEMBER 4  
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LEVEL 1  
AN 5183379 INPADOC  
TI RESERVOIR FOR A CRYOGENIC MIXTURE AND PROCESS FOR DRAWING OFF THE LIQUID  
IN DELACOUR, PIERRE; PROST, ALAIN; MONDAIN-MONVAL, GERARD  
INS DELACOUR PIERRE; PROST ALAIN; MONDAIN-MONVAL GERARD  
PA L'AIR LIQUIDE, SOCIETE ANONYME POUR L'ETUDE ET L'EXPLOITATION DES  
PROCEDES GEORGES CLAUDE; COMPAGNIE FRANCAISE DE PRODUITS OXYGENES  
PAS AIR LIQUIDE; FRANCE PROD OXYGENES CO  
PAA FR; FR  
LA French  
DT Patent  
PIT EPA1 PUBL. OF APPLICATION WITH SEARCH REPORT  
PI EP 181796 A1 19860521  
DS R: AT BE CH DE FR GB IT LI LU NL SE  
AI EP 1985-401989 A 19851014  
PRAI FR 1984-16017 A 19841019  
OSDW 86-156947  
ICM (4) F17C009-00  
IPCR F17C0009-00 [I,A]; F17C0013-02 [I,A]  
F17C0009-00 [I,C\*]; F17C0013-00 [I,C\*]

LEVEL 2  
AN 5183379 INPADOC  
TI RESERVOIR FOR A CRYOGENIC MIXTURE AND PROCESS FOR DRAWING OFF THE LIQUID  
IN DELACOUR, PIERRE; PROST, ALAIN; MONDAIN-MONVAL, GERARD  
INS DELACOUR PIERRE; PROST ALAIN; MONDAIN-MONVAL GERARD  
PA L'AIR LIQUIDE, SOCIETE ANONYME POUR L'ETUDE ET L'EXPLOITATION DES  
PROCEDES GEORGES CLAUDE; COMPAGNIE FRANCAISE DE PRODUITS OXYGENES  
PAS AIR LIQUIDE; FRANCE PROD OXYGENES CO  
PAA FR; FR  
LA French  
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PI EP 181796 B1 19890111  
DS R: AT BE CH DE FR GB IT LI LU NL SE  
AI EP 1985-401989 A 19851014  
PRAI FR 1984-16017 A 19841019  
ICM (4) F17C009-00  
IPCR F17C0009-00 [I,A]; F17C0013-02 [I,A]  
F17C0009-00 [I,C\*]; F17C0013-00 [I,C\*]

LEGAL STATUS  
AN 5183379 INPADOC  
19860521 EPAK + DESIGNATED CONTRACTING STATES:  
EP A1  
AT BE CH DE FR GB IT LI LU NL SE

19860521 EP17P + REQUEST FOR EXAMINATION FILED  
 19851018  
 19880107 EP17Q + FIRST EXAMINATION REPORT  
 19871117  
 19881006 EPITF + IT: TRANSLATION FOR A EP PATENT FILED  
 BARZANO' E ZANARDO MILANO S.P.A.  
 19890111 EPAK + DESIGNATED CONTRACTING STATES:  
 EP B1  
 AT BE CH DE FR GB IT LI LU NL SE  
 19890111 EPREF CORRESPONDS TO:  
 AT 39992 T 19890115 P  
 19890216 EPREF CORRESPONDS TO:  
 DE 3567528 19890216 P  
 19890510 EPGBT + GB: TRANSLATION OF EP PATENT FILED (GB SECTION  
 77(6) (A)/1977)  
 19900110 EP26N + NO OPPOSITION FILED  
 19931031 EPITTA IT: LAST PAID ANNUAL FEE  
 19931216 EPEPTA + LU: LAST PAID ANNUAL FEE  
 19950131 EPEAL + SE: EUROPEAN PATENT IN FORCE IN SWEDEN  
 EP 85401989.0 F  
 19980430 EPBERE - BE: LAPSED  
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 19971031  
 19980430 EPBERE - BE: LAPSED  
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 19971031  
 19980603 EPGBPC - GB: EUROPEAN PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL  
 FEE  
 19971014  
 19980615 EPREG REFERENCE TO A NATIONAL CODE  
 CHPL - CH: PATENT CEASED  
 19980701 EPNLV4 - NL: LAPSED OR ANULLED DUE TO NON-PAYMENT OF THE ANNUAL FEE  
 19980501  
 20030603 EPEUG - SE: EUROPEAN PATENT HAS LAPSED  
 20030815 EPREG REFERENCE TO A NATIONAL CODE  
 FRST - FR: LAPSED  
 .....20031014

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 MEMBER 5  
 -----

LEVEL 1  
 AN 18227187 INPADOC  
 TI RECIPIENTE PARA MEZCLA CRIOGENA LIQUIDA.  
 PA L'AIR LIQUIDE, SOCIETE ANONYME  
 PAS AIR LIQUIDE  
 PAA FR  
 DT Patent  
 PIT ESA1 PATENT  
 PI ES 547996 A1 19860716  
 AI ES 1985-547996 A 19851018  
 PRAI FR 1984-16017 A 19841019  
 ICM (4) F17C009-00  
 ICS (4) F25J005-00  
 IPCR F17C0009-00 [I,A]; F17C0013-02 [I,A]

F17C0009-00 [I,C\*]; F17C0013-00 [I,C\*]

LEVEL 2

AN 18227187 INPADOC  
TI RECIPIENTE PARA MEZCLA CRIOGENA LIQUIDA.  
PA L'AIR LIQUIDE, SOCIETE ANONYME  
PAS AIR LIQUIDE  
PAA FR  
DT Patent  
PIT ESA5 PATENT (FICTIVE 2ND PUBLICATION)  
PI ES 547996 A5 19860816  
AI ES 1985-547996 A 19851018  
PRAI FR 1984-16017 A 19841019  
ICM (4) F17C009-00  
ICS (4) F25J005-00

LEVEL 3

AN 18227187 INPADOC  
TI RECIPIENTE PARA MEZCLA CRIOGENA LIQUIDA.  
PA L'AIR LIQUIDE, SOCIETE ANONYME  
PAS AIR LIQUIDE  
PAA FR  
DT Patent  
PIT ESA1 PATENT  
PI ES 8609659 A1 19861216  
AI ES 1985-547996 A 19851018  
PRAI FR 1984-16017 A 19841019  
ICM (4) F17C009-00  
ICS (4) F25J005-00  
IPCR F17C0009-00 [I,A]; F17C0013-02 [I,A]  
F17C0009-00 [I,C\*]; F17C0013-00 [I,C\*]

LEGAL STATUS

AN 18227187 INPADOC  
20041216 ESFD1A - PATENT LAPSED  
20041102  
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MEMBER 6  
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LEVEL 1

AN 10164484 INPADOC  
TI RECIPIENT POUR MELANGE CRYOGENIQUE ET PROCEDE DE SOUTIRAGE DU LIQUIDE.  
IN PIERRE DELACOUR, GERARD MONDAIN-MONVAL ET ROGER PROST  
INS DELACOUR PIERRE; MONDAIN-MONVAL GERARD; PROST ROGER  
PA AIR LIQUIDE  
  
PAS AIR LIQUIDE  
PAA FR  
DT Patent  
PIT FRA1 APPLICATION, FIRST PUBLICATION  
PI FR 2572162 A1 19860425  
AI FR 1984-16017 A 19841019  
PRAI FR 1984-16017 A 19841019  
ICM (4) F17C009-00

ICS (4) F25J005-00  
IPCR F17C0009-00 [I,A]; F17C0013-02 [I,A]  
F17C0009-00 [I,C\*]; F17C0013-00 [I,C\*]

LEVEL 2

AN 10164484 INPADOC  
TI RECIPIENT POUR MELANGE CRYOGENIQUE ET PROCEDE DE SOUTIRAGE DU LIQUIDE.  
IN PIERRE DELACOUR, GERARD MONDAIN-MONVAL ET ROGER PROST  
INS DELACOUR PIERRE; MONDAIN-MONVAL GERARD; PROST ROGER  
PA AIR LIQUIDE  
PAS AIR LIQUIDE  
PAA FR  
DT Patent  
PIT FRB1 PATENT OF INVENTION (SECOND PUBLICATION)  
PI FR 2572162 B1 19880226  
AI FR 1984-16017 A 19841019  
PRAI FR 1984-16017 A 19841019  
ICM (4) F17C009-00  
ICS (4) F25J005-00  
IPCR F17C0009-00 [I,A]; F17C0013-02 [I,A]  
F17C0009-00 [I,C\*]; F17C0013-00 [I,C\*]

LEGAL STATUS

AN 10164484 INPADOC  
20030815 FRST - LAPSED

.....20031014

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MEMBER 7

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LEVEL 1

AN 29541156 INPADOC  
IN PIERRE DELACOUR; ROGER PROST; GERARD MONDAIN-MONVAL  
INS DELACOUR PIERRE; PROST ROGER; MONDAIN-MONVAL GERARD  
PA AIR LIQUIDE; FRANCE PROD OXYGENES CO  
PAS AIR LIQUIDE; FRANCE PROD OXYGENES CO  
DT Patent  
PIT GRA PATENT APPLICATION  
PI GR 852521 A 19860207  
AI GR 1985-2521 A 19851018  
PRAI FR 1984-16017 A 19841019  
IPCR F17C0009-00 [I,A]; F17C0013-02 [I,A]  
F17C0009-00 [I,C\*]; F17C0013-00 [I,C\*]

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MEMBER 8

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LEVEL 1

AN 38192709 INPADOC  
TI VESSEL FOR LIQUID FREEZING MEDIUM MIXTURE AND METHOD OF EXTRACTING LIQUID  
FREEZING MEDIUM MIXTURE.  
IN PIEERU DORAKUURU; ROJIE PUROSUTO; JIERARU MONDAN MONBUARU  
INS PIEERU DORAKUURU; ROJIE PUROSUTO; JIERARU MONDAN MONBUARU  
PA L'AIR LIQUIDE  
PAS AIR LIQUIDE

DT Patent  
PIT JPA2 DOCUMENT LAID OPEN TO PUBLIC INSPECTION  
PI JP 61112897 A2 19860530  
AI JP 1985-232353 A 19851019  
PRAI FR 1984-16017 A 19841019  
ICM (4) F17C003-00  
ICS (4) F17C013-00; (4) F28D001-06  
IPCR F17C0009-00 [I,A]; F17C0013-02 [I,A]  
F17C0009-00 [I,C\*]; F17C0013-00 [I,C\*]

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MEMBER 9  
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LEVEL 1

AN 16947366 INPADOC  
TI RECIPIENT POUR MELANGE CRYOGENIQUE ET PROCEDE DE SOUTIRAGE DU LIQUIDE .  
PA L'AIR LIQUIDE, S.A.-ET./EXP.DE PROC.(GEORGES CLAUDE); COMPAGNIE FRANCAISE  
DE PRODUITS OXYGENES  
PAS AIR LIQUIDE; FRANCE PROD OXYGENES CO  
PAA FR; FR  
DT Patent  
PIT PTA APPLICATION  
PI PT 81332 A 19851101  
AI PT 1985-81332 A 19851018  
PRAI FR 1984-16017 A 19841019  
ICM (4) F17C009-00  
ICS (4) F25J005-00  
IPCR F17C0009-00 [I,A]; F17C0013-02 [I,A]  
F17C0009-00 [I,C\*]; F17C0013-00 [I,C\*]

LEVEL 2

AN 16947366 INPADOC  
TI RECIPIENTE PARA MISTURA CRIOGENICA LIQUIDA E PROCESSO DE TIRAGEM DO  
LIQUIDO .  
PA L'AIR LIQUIDE, SA.-ET./EXP.PROC.(GEORGES CLAUDE); COMPAGNIE FRANCAISE DE  
PRODUITS OXYGENES  
PAS AIR LIQUIDE; FRANCE PROD OXYGENES CO  
PAA FR; FR  
DT Patent  
PIT PTB GRANTED PATENT  
PI PT 81332 B 19870918  
AI PT 1985-81332 A 19851018  
PRAI FR 1984-16017 A 19841019  
ICM (5) F17C009-00  
ICS (5) F25J005-00  
IPCR F17C0009-00 [I,A]; F17C0013-02 [I,A]  
F17C0009-00 [I,C\*]; F17C0013-00 [I,C\*]

LEGAL STATUS

AN 16947366 INPADOC  
19981130 PTMM3A - ANNULMENT OR LAPSE DUE TO NON-PAYMENT OF FEES  
LAPSE DUE TO NON-PAYMENT OF FEES  
19980731  
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1984fr-16017/ap,prn

L3 ANSWER 1 OF 1 WPINDEX COPYRIGHT 2006 THE THOMSON CORP on STN  
ACCESSION NUMBER: 1986-156947 [25] WPINDEX  
DOC. NO. NON-CPI: N1986-116756  
DOC. NO. CPI: C1986-067031  
TITLE: Vessel for storing liq. cryogenic mixt. - has internal  
heat exchanger through which liq. is drawn off.  
DERWENT CLASS: J07 Q57 Q69 Q75  
INVENTOR(S): DELACOUR, P; MONDAINMON, G; PROST, A  
PATENT ASSIGNEE(S): (CAAL) AIR LIQUIDE CANADA LTEE; (FROX-N) CIE FR PROD  
OXYGENE  
COUNTRY COUNT: 15  
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN	IPC
EP 181796	A	19860521	(198625)*	FR	11		
R: AT BE CH DE FR GB IT LI LU NL SE							
FR 2572162	A	19860425	(198625)				
PT 81332	A	19860421	(198629)				
ES 8609659	A	19861216	(198707)				
US 4646525	A	19870303	(198711)				
EP 181796	B	19890111	(198903)	FR			
R: AT BE CH DE FR GB IT LI LU NL SE							
DE 3567528	G	19890216	(198908)				
CA 1279000	C	19910115	(199109)				

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
EP 181796	A	EP 1985-401989	19851014
ES 8609659	A	ES 1985-547996	19851018
US 4646525	A	US 1985-790806	19851025

PRIORITY APPLN. INFO: \*\*\*FR 1984-16017 19841019\*\*\*  
REFERENCE PATENTS: FR 1201524; FR 1533684; FR 2406782; GB 148588; US 2260357  
INT. PATENT CLASSIF.: F15C005-00; F17C009-00; F17C013-00; F25J005-00  
BASIC ABSTRACT:

EP 181796 A UPAB: 19930922

Liq. cryogenic mixt. is stored in a vessel with an internal heat exchanger (20) in the form of a coil of pipe (20). The lower end of this pipe coil is fitted with a spring loaded valve which opens when the pressure inside the vessel reaches a preset value. When the valve is open the liq. mixt. is drawn off through the pipe (15). The internal pressure can be raised by means of a circuit (27).

USE/ADVANTAGE - All the liq. drawn off passes through the heat exchanger (20). This ensures that the liq. drawn off has the same compsn. as the mixt. in the vessel and does not consist of only the more volatile fractions.

1/3

FILE SEGMENT: CPI GMPI  
FIELD AVAILABILITY: AB

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## Glossary of Terms

[A] [B] [C] [D] [E] [F] [G] [H] [I] [J] [K] [L] [M] [N] [O] [P] [Q] [R] [S] [T] [U]  
[V] [W] [X] [Y] [Z]

### Dairy ranching

The practice of keeping cows of relatively low milk yield, either indigenous or low-grade exotic crosses especially of dual-purpose breeds, who are parted from their calves in the evenings, milked out in the morning, and spend the day with their calves at foot; the cows are not milked in the evening.

### Dam

Mother. Alternatively an artificial lake made by constructing a wall of earth or concrete, etc.

### Damage

The adverse effect on plants or crops due to biotic or abiotic agents, resulting in a reduction of yield and/or quality. Compare with injury.

### Dam catchment

Catchment area above a water storage reservoir.

### Damping off

The rot of seedlings near soil level or prior to emergence (pre-emergence) or after emergence (post-emergence). Disease or necrotic symptom of disease in seedlings in which the seedling is decayed near the soil line and the seedling topples. Damping-off pathogens may also prevent seed germination and kill the sprout before it emerges from the soil.

### Daphnia

A cladoceran (zooplankton) genus that is very common in lake ecosystems and is often used as a test animal for toxicity bioassays.

### Data base

The total of all sampling points ('cases') assembled in a convenient form for retrieval and processing.

### Data base management

A computerised system which manages data system according to a specific format.

### Dauer larva

Nematode juvenile in which development is arrested during unsuitable conditions and resumes when conditions improve.

### Days-to-harvest

The least number of days, established by law, between the last pesticide application and the harvest date, as set

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**Disinfectant**

Agent that kills microorganisms e.g. a chemical or other agent that kills or inactivates micro-organisms in animals, seeds or other plant parts, chemicals used to clean or surface sterilise inanimate objects.

**Disinfest**

To kill pathogens that have not yet initiated disease, but that occur in or on such inanimate objects as soil, tools and so on, or that occur on the surface of such plant parts as seeds.

**Disinfestant**

An agent that kills or inactivates pathogens in the environment or on the surface of a plant or plant organ before infection takes place.

**Disorder**

Any harmful deviation from normal plant physiological processes due to abiotic factors.

**Dispersal**

Movement and spread of individual organisms out of a population (emigration) or into a population (immigration).

**Dispersal unit**

Seed plus associated tissues of flower, fruit or specialised leaves. Any device for spread and survival that can be recognised visually and counted.

**Dispersibility (in relation to pesticides)**

The ease with which a substance may be dispersed uniformly in a fluid.

**Displacement**

In dispersal unit transport, the process by which the unit is actually moved from the point of formation to the point of landing; the middle process of the dispersal act consisting of takeoff, flight and landing, or liberation, displacement and deposition.

**Dissemination**

The transport of inoculum or pest from a diseased to a healthy plant.

**Dissolved oxygen**

Oxygen dissolved in water and used by aquatic organisms for respiration processes.

**Distal**

Away from the point of attachment.

**Distome**

Fluke with two suckers; oral and ventral.

**Distribution**

Dispersal and spread of an organism to areas outside of its previous geographical range; 'geographical distribution' is synonymous with 'range'.

**Disulphide bond**

A bond formed between the sulphur atoms of two different organic compounds, such as cysteine; often responsible for joining different proteins or bending the primary amino acid sequence into a more complex structure.

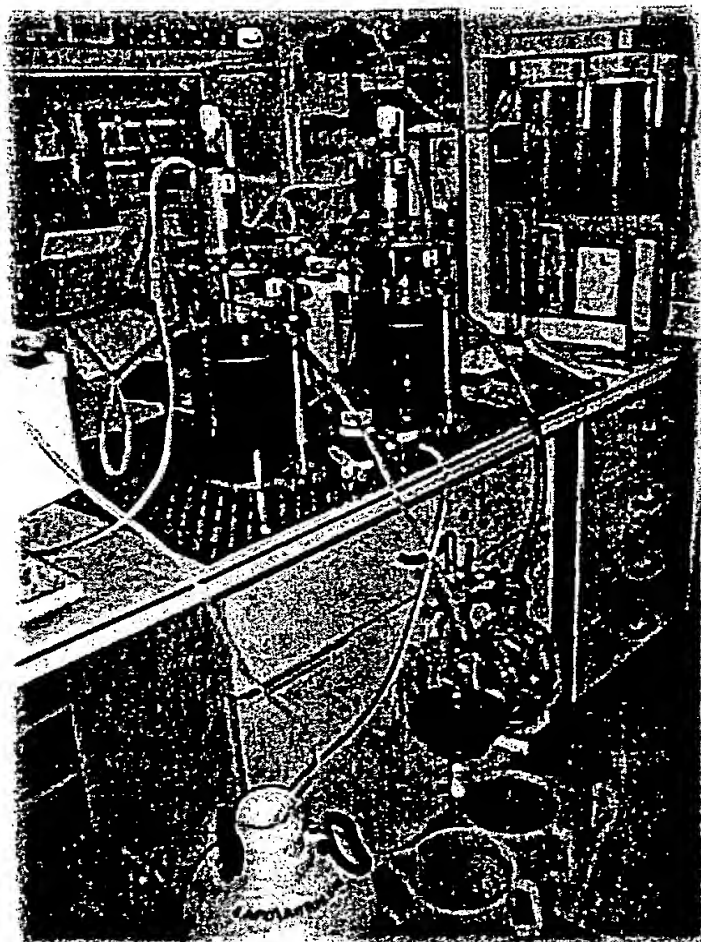
**Diurnal**

Active during the daytime. Daily.

**Diversity index**

A measure of the number of species and the evenness of the distribution of population or biomass among species

## Dispersibility testing



Chemical dispersants enhance the natural dispersion-rate by reducing the interfacial tension between oil and water. The slick is broken into small droplets, which will disappear into the sea. The oil laboratory is performing dispersability testing with some of the most recognized test-methods (IFP, MNS, WSL, Exdet). The oil droplet size and distribution are measured by a particle sizer analyzer. This forms the basis for selection of the best dispersant for the current oil and estimation of the "time-window" for use of dispersants in a spill situation at sea.

*Illustration: The IFP test is a low energy dispersibility test. Energy is applied to oil on surface by a submerged beater-ring and dispersed oil is collected from the bottom of the vessel.*

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